

## **Moving the North/South CMP Walls**

This procedure details the necessary steps required to move the north and south muon walls in the CDF collision hall. These 200 ton objects have to move "out" away from the beamline in order for experimenters to access the central arches and work on the detector and back "in" again in order to take physics quality data. The walls move using a screw drive system. They sit on top of hardened rails upon which they travel. Full motion of the wall is approximately 80 inches and requires 25 minutes to complete that travel. A checklist is included in this procedure.

Due to the weight and cost of the CMP Walls, it is required that the head of PPD review and approve this procedure.

Editorial Hand-Processed Changes Other Than Spelling  
Require Co-Project Manager Approval

HPC Number	Date	Section Number	Initials
1.	_____	_____	_____
2.	_____	_____	_____
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### Approvals

\_\_\_\_\_  
(CDF Operations Department Co-Head)

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Particle Physics Division Head)

\_\_\_\_\_  
(Date)

**1.0 Controlled Copies of this procedure.**

Two controlled copies of this procedure will exist.

One will be held in the CDF Department Office Library.

The others will be on the CDF web page at

<http://www-cdf.fnal.gov/cdfsafecdfproclist.html>

All other copies will be marked, " INFORMATIONAL COPY ONLY "

## **2.0 The Procedure**

The CMP shall be moved in accordance with the checklist provided in the next Section. No other procedure is required for this move operation.

### **3.0 Checklist**

The next several pages contain the checklist for moving the CMP detectors in the CDF Collision Hall.

## **CMP Muon Wall Move Checklist**

The minimum number of personnel required to conduct this operation is two, at least one of which is trained in the procedure and will act as the operator. The second person is there to act as an observer. During the move operation, no other work is to be performed in the immediate area around the equipment being moved.

Muon Wall Being Moved: \_\_\_\_\_North \_\_\_\_\_South

Date of Move Operation:\_\_\_\_\_

Printed Name of Operator:\_\_\_\_\_

Printed Name of Observer(s):\_\_\_\_\_

## **Closing a CMP Wall**

### **I. Preoperational Inspection**

- Verify that lights located on top of central arches have been turned off
- Remove Basket from lift aloft trapped between central detector and muon wall and store upside down on top of lift
- Check IMU cable and pipe festoons are free and clear
- Check that lift is turned OFF
- Plug lift charger cord into wall outlet
- Check that the lift will clear the cables on the CMP ASD crate
- Collapse extension ladder and store next to COT rack
- Position COT water drain bucket is located between COT and Central arch rack and that the drain tubes have been inserted into it
- Verify that floor is free of any debris
- Verify that rails are free of any foreign objects
- Verify the adjacent CMX stands are in their "IN" position

### **II. Preparation for the Move and the Move itself**

- Plug in the motor controller box for the Wall to be moved.
- Position the operator at the control West end of the Wall and the observer at the east end
- Depress the "IN" switch and verify that both screw drives are turning

Note: Wall motion software is designed to move the wall to its proper position and stop. The observer should watch for mechanical interferences and problems with cable dressing throughout the entire process

### **III. Secure from Move Operation**

- Unplug the drive system from the AC outlet
- Turn off lights on muon wall
- Turn on cooling fans mounted on muon walls

## **Opening a CMP Wall**

### **IV. Preoperational Inspection**

- Turn off cooling fans mounted on muon walls so that its easier to communicate
- Turn on muon wall lights to help look for interferences
- Verify that floor behind wall is free of any debris
- Insure wooden ramps are not installed adjacent to the rails
- Verify that rails are free of any foreign objects

### **V. Preparation for the Move and the Move itself**

- Plug in the motor controller box for the Wall to be moved.
- Position the operator at the control West end of the Wall and the observer at the east end
- Depress the "OUT" switch and verify that both screw drives are turning

Note: The software stop for the wall moving in the out direction is set as large as possible. For 99% of the jobs, the muon wall can be stopped well before it reaches this limit.

### **VI. Secure from Move Operation**

- Unplug the drive system from the AC outlet
- Assemble single man genie basket

#### **4.0 Deviations from the Procedure**

All deviations from the above procedure must be approved by the Department Head, after consultation with the head of the I&I group or their deputies.



**5.0 Required Training and Authorized Training Personnel.**

The required training for this (CDF-II 405) procedure is in the form of "hands-on" experience gained while participating in an actual CMP move conducted by trained personnel. All personnel participating in this operation must be approved for CDF Supervised Access or CDF Controlled Access.

**LIST OF AUTHORIZED TRAINING PERSONNEL FOR THIS PROCEDURE:**

Name (Last, First)	I.D.#
Allen, Derwin	6220
Carter, Harry	3236
Voirin, John	4940
Roser, Rob	11910
Lukens, Pat	9382
Moccia, Stefano	12246

Either a procedure practice run led by an authorized trainer or a verbal discussion with an authorized trainer is the only required training. This choice depends on the specific procedure being performed and experience of the trainee.

## **6.0 Training Materials.**

A copy of this procedure

**7.0 List of Trained People for this procedure.**

The list of trained people for this procedure will exist in written form in the CDF Department copy of this procedure. Only CDF technicians will be trained in the procedure.

Harry Carter  
Rob Roser  
Pat Lukens  
Stefano Moccia  
Dervin Allen  
John Voirin  
Andrew Szymulanski

## **8.0 References and Supporting Documentation**

None